ENVIRONMENTAL CHECKLIST RESPONSES AND ANALYSIS

The following discussion includes explanations of answers to the above questions regarding potential environmental impacts, as indicated on the preceding checklist. Each subsection is annotated with the number corresponding to the checklist form.

EXISTING SETTING:
The proposed project is located on a 4.86 acre parcel north of Ames Avenue, midway between Sinclair Frontage Road and Berryessa Creek, south of Yosemite Drive. The parcel is currently developed with an approximately 57,000 square foot industrial building that was previously occupied by Holland-Pacific Hitch Company. Adjacent to the project site is the former Great Western Chemical Company to the east and Micro-Scientific Glass Blowing to the west. Surrounding parcels are developed with heavy industrial and warehouse buildings with occupants such as King Stucco, Floor Seal, US Filter, Infinity Packaging, and HK Tooling & Design.

PROJECT DESCRIPTION:
The applicant is proposing to demolish an existing 57,000 square foot industrial building (formerly Holland-Pacific Hitch Company) and construct a 47,990 square foot building for the operation of an animal facility, located in the Ames Industrial Park. Proposed uses include adoption services, dog-park, doggie daycare, animal boarding, physical and behavioral evaluation, educational classes, medical/surgical and offices. The project will consist of two (2) phases: Phase I will include the demolition and construction of the animal facility and Phase II will include enhanced landscaping, fencing and other exterior site amenities.

Attachment to: Humane Society of Silicon Valley; Use Permit No. UP2004-7; 'S'-Zone No. SZ2004-3

Project Number: EA2004-8

Discussion of Checklist/Legend

PS: Potentially Significant Impact
LS/M: Less Than Significant with Mitigation Incorporation
LS: Less Than Significant Impact
NI: No Impact

I. AESTHETICS

Environmental Impacts

a) Would the project have a substantial adverse effect on a scenic vista? NI.

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? NI.

c) Would the project substantially degrade the existing visual character or quality of the site and its surroundings? NI.

d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? NI.

II. AGRICULTURE RESOURCES

Environmental Impacts

a) Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? NI.

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract? NI.

c) Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? NI.

III. AIR QUALITY

Environmental Impacts

a) Would the project conflict with or obstruct implementation of the applicable air quality plan? NI.

b) Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation? NI.

c) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)? NI.

d) Would the project expose sensitive receptors to substantial pollutant concentrations? LS.

Impact III-d-1. The project site is located adjacent to the former Great Western Chemical site which, according to the Phase I/II Environmental Site Assessment, is identified as a site of potential environmental concern due to contaminated groundwater with tetrachloroethene (PCE), trichloroethene (TCE) and daughter products. As ongoing mitigation, groundwater containing PCE/TCE solvents extracted from the plumes are mitigated in the air-stripping/carbon polish system treatment plant, which could be a potential health risk hazard to the project site by emissions to the atmosphere from the operation of the groundwater remediation air striping system. However, the Bay Area Air Quality Management District (BAAQMD) regulates and oversees monitoring of the treatment plant. In addition, the BAAQMD requires emissions levels be maintained so that no solvent exposure will exceed the human health risk standards, therefore, the impact is anticipated to be less than significant.

e) Would the project create objectionable odors affecting a substantial number of people? NI.

IV. BIOLOGICAL RESOURCES

Environmental Impacts

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish & Game or U.S. Fish & Wildlife Service? LS/M.

Impact IV-a-1. The project site consists of approximately 2.2 acres that has remained undeveloped and is currently unvegetated. A Burrowing Owl Survey of the project site was conducted on August 31, 2004 by H.T. Harvey Associates to determine the presence, or any potential habitat, for Burrowing Owls. According to the survey, no Burrowing Owls or secondary evidence (feathers, castings, prey remains) were observed at the project site. In addition, no ground squirrel burrows or other burrows suitable for owls occurred at the property. However, habitats for Burrowing Owls are ephemeral, as they are created and maintained by transient fossorial animals, such as ground squirrels, and the project site conditions could change over time. The potential presence of Burrowing Owls on the project site could change prior to pre-grading or construction activities, therefore the impact would be considered significant unless mitigated. However, the Burrowing Owl Survey recommends a follow-up survey be conducted if site development does not occur within 3 months (December 31, 2004). If Burrowing Owls were observed at the project site, mitigation measures would require off-site habitat protection and enhancement at a 1:1 acreage replacement ratio, therefore, the impact would be considered less than significant with mitigation.

MM 1: Commencing on January 1, 2005, within 30 days prior to any grading, discing for fire or weed control, or site improvement permit issuance, the applicant shall submit to the Planning Division a Western Burrowing Owl survey performed by a qualified ornithologist. The survey shall be valid for 30 days, after which time a new survey will be required prior to any site/soil disturbance. The purpose of the survey is to locate any individual or owl pairs presently on-site and to be sure that they are included in subsequent mitigation efforts. Impacts to burrowing owls shall be mitigated through the protection and enhancement of off site habitat at a 1:1 acreage replacement ratio. The mitigation plan shall be submitted to the Planning Division for approval and to the Department of Fish & Game as a courtesy. No grading or construction activity within habitat areas shall be allowed until the mitigation plan has been approved by the City Planning Division and the applicant has agreed to the mitigation measures or until such time as the applicant has entered into an agreement with the City to mitigate this impact, through a legal document approved by the City Attorney; this may include participation in a Citywide mitigation program.

If so desired, the applicant may choose to enter into a mitigation agreement with the California Department of Fish & Game in lieu of an agreement with the City. The City shall accept a mitigation agreement between the applicant and DF&G as full compliance with the requirement for mitigation of burrowing owl habitat loss.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish & Game or U.S. Fish & Wildlife Service? NI.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? NI.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? NI.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? NI.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? NI.

V. CULTURAL RESOURCES

Environmental Impacts

a) Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? NI.

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? NI.

c) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? NI.

d) Would the project disturb any human remains, including those interred outside of formal cemeteries? NI.

VI. GEOLOGY AND SOILS

Environmental Impacts

a) Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. NI.

ii) Strong seismic ground shaking? NI.

iii) Seismic-related ground failure, including liquefaction? NI.

iv) Landslides? NI.

b) Would the project result in substantial soil erosion or the loss of topsoil? NI.

c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? NI.

d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? NI.

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? NI.

VII. HAZARDS AND HAZARDOUS MATERIALS

Environmental Impacts

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? LS/M.

Impact VII-a-1: The project site is developed with an approximately 57,000 square foot industrial building, originally constructed in 1958, which the applicant is proposing to demolish. According to the Phase I/II Environmental Site Assessment by the Denali Group, submitted by the applicant, limited samplings revealed the presence of lead-base paint on the existing structure. Construction activities proposed by the project may involve use and transport of hazardous materials, including contaminated soil and/or groundwater, and building demolition debris containing lead and asbestos. Removal, relocation, and transportation of hazardous materials could result in accidental releases or spills, potentially posing heath risk to workers, the public, and environment, therefore the impact would be considered significant unless mitigated. However, an addendum (dated September 17, 2004) to the Phase I/II ESA recommends the applicant follow demolition guidelines requiring testing for asbestos and lead-based paint prior to demolition in order to mitigate environmental exposure and to segregate the hazardous materials from non-hazardous construction debris. In addition, if lead-based paint or asbestos is identified, Bay Area Air Quality Management District, as well as Federal and State construction regulations shall be followed during construction activities. Therefore, with lead/asbestos testing, demolition guidelines, and applicable regulations, the impact would be reduced to a level considered less than significant with mitigation.

MM 1.: Prior to demolition permit issuance or any pre-demolition activities, an asbestos and lead-based paint survey shall be performed.

MM 2: Prior to condition of approval for any demolition activity, if asbestos-containing materials are determined to be present, the materials shall be abated by a certified asbestos abatement contractor in accordance with the regulations and notification requirements of the Bay Area Air Quality Management District. If lead-based paint is identified, then federal and State construction worker health and safety regulations shall be followed during renovation or demolition activities. If loose or peeling lead-based paint is identified, it shall be removed by a qualified lead abatement contractor and disposed of in accordance with existing hazardous waste regulations. In addition, if

lead-based paint is identified, a contamination mitigation plan shall be submitted to and approved by the Department of Toxic Substance.

b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? LS/M.

Impact VII-b-1: The proposed project site is located in an existing industrial park developed with businesses such as King Stucco, Floor Seal, US Filter and HK Tooling & Design. The applicant is proposing to operate an animal facility in an existing heavy industrial building which could subject the public and sensitive receptors (children and elderly) to hazardous materials in the event of an accidental release. According to a risk assessment submitted by the applicant, there are 2 facilities within ¼ mile of the project site that contain or use hazardous materials in excess of threshold planning quantities, therefore the impact would be considered significant unless mitigated. However, the Milpitas Fire Department recommends the applicant prepare of an Emergency Action Plan (Plan) that incorporates training, evacuation plan, shelter-in-place program. In addition, the Milpitas Fire Department recommends the installation of an approved wind/weather monitoring device. Therefore, with these programs in place, the impacts would be reduced to a level of less than significant with mitigation incorporation.

MM 1: Prior to occupancy, the Emergency Action Plan shall be revised to include identification of key personnel in the implementation of the plan, training documentation, written evacuation plan showing evacuation routes, shelter in place and assembly areas, and location of emergency equipment. Once the Emergency Action Plan has been completed it shall be submitted to the Milpitas Fire Department for review for completeness prior to implementation.

MM 2: Before implementing the EAP, the employer shall designate and train a sufficient number of persons to assist in the safe and orderly emergency evacuation of employees. The employer shall advise each employee of his/her responsibility under the plan.

MM 3. A drill utilizing all employees in their functions in the Emergency Response Plan, shall be scheduled and completed in the presence of the fire department prior to occupancy. This drill is to be completed on an annual basis. Also, monthly drills shall be conducted on site with Humane Society staff. All training drills shall be documented.

MM 4: A windsock or other approved wind/weather monitoring device shall be placed on site to aid in determining wind direction in the event of a nearby hazardous material release.

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? NI.

d) Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? LS

Impact VII-d-1: The project site is located adjacent to a property formerly occupied by the Great Western Chemical Company. This site has been identified as a site of potential environmental concern. Previous hazardous material releases of tetrachloroethene (PCE),

trichloroethene (TCE) and daughter products were identified in groundwater, with the solvent plume extending northwest across the northern portion of the project site. A groundwater extraction system was installed to treat contaminated groundwater in an engineered treatment plant located adjacent to the east property line of the project site. However, the project site is not located on a site which is included on a list of hazardous materials sites and, therefore, would not create a significant hazard to the public or the environment and would be considered a less than significant impact.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project site? NI.

The project site is not located within an airport land use plan or within two miles of a public airport or public use airport.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project site? NI.

The project site is not located within the vicinity of a private airstrip.

g) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? NI.

h) Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? NI.

VIII. HYDROLOGY AND WATER QUALITY

Environmental Impacts

a) Would the project violate any water quality standards or waste discharge requirements? NI.

b) Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? NI.

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? NI.

d) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? NI.

e) Would the project create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? NI.

f) Would the project otherwise substantially degrade water quality? NI.

g) Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? The project site contains areas that lie within Zone A which is subject to a 100 year flood hazard and Zone X which is subject to a 500 year flood hazard. NI.

h) Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows? NI.

i) Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? NI.

j) Would the project expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow? NI.

IX. LAND USE AND PLANNING

Environmental Impacts

a) Would the project physically divide an established community? NI.

b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? NI.

c) Would the project conflict with any applicable habitat conservation plan or natural community conservation plan? NI.

X. MINERAL RESOURCES

Environmental Impacts

a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? NI.

b) Would the project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? NI.

XI. NOISE

Environmental Impacts

a) Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? NI.

b) Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? NI.

c) Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? NI.

d) Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? NI.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project site to excessive noise levels? NI.

This project site is not within an airport land use plan or within two miles of a public airport or public use airport.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project site to excessive noise levels? NI.

This project site is not within the vicinity of a private airstrip.

XII. POPULATION AND HOUSING

Environmental Impacts

a) Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? NI.

b) Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? NI.

c) Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? NI.

XIII. PUBLIC SERVICES

The project site is served by the following service providers:

- Fire Protection. Fire protection is provided by the City of Milpitas Fire Department which provides structural fire suppression, rescue, hazardous materials control and public education services.

- Police Protection. Police protection is provided by the City of Milpitas Police Department.

- Schools. Educational facilities are provided by the Milpitas Unified School District that operates kindergarten through high school services within the community. Schools that would serve the project include Milpitas High School (grades 9-12), middle schools (grades 6-8) and elementary schools (grades K-5).

- Maintenance. The City of Milpitas provides public facility maintenance, including roads, parks, street trees and other public facilities. Milpitas' Civic Center is located at 455 E. Calaveras Boulevard.

- Other governmental services. Other governmental services are provided by the City of Milpitas including community development and building services and related governmental services. Library service is provided by the Santa Clara County Library.

Environmental Impacts

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

Fire Protection? NI.

Police Protection? NI.

Schools? NI.

Parks? NI.

Other Public Facilities? NI.

XIV. RECREATION

Environmental Impacts

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
NI.
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment? NI.

XV. TRANSPORTATION/TRAFFIC

Major roadways serving the site include:
Ames Avenue (2 lanes)
South Milpitas Boulevard (4 lanes)

Environmental Impacts

Would the project:

a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? NI.

b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways? NI.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? NI.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections). NI.

e) Result in inadequate emergency access? NI.

f) Result in inadequate parking capacity? NI.

g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)? NI.

XVI. UTILITIES AND SERVICE SYSTEMS --

The project site is served by the following service providers:

- Electrical and natural gas power: Pacific Gas and Electric Company
- Communications: AT&T and Southern Bell Corporation
- Water supply: Provided by the City of Milpitas with the wholesale providers being either the San Francisco Water Department or the Santa Clara Valley Water District
- Recycled water: South Bay Water Recycling Program
- Sewage treatment: Provided by the City of Milpitas and treated at the San Jose/Santa Clara Water Pollution Plant in San Jose.
- Storm drainage: City of Milpitas

- Solid waste disposal: Disposal is at the Newby Island Landfill, operated by BFI
- Cable Television: Comcast

Environmental Impacts

Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? NI.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? NI.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? NI.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? NI.

e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? NI.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? NI.

g) Comply with federal, state, and local statutes and regulations related to solid waste? NI.

XVII. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? LS/M.

Impact IV-a-1. The project site consists of approximately 2.2 acres that has remained undeveloped and is currently unvegetated. A Burrowing Owl Survey of the project site was conducted on August 31, 2004 by H.T. Harvey Associates to determine the presence, or any potential habitat, for Burrowing Owls. According to the survey, no Burrowing Owls or secondary evidence (feathers, castings, prey remains) were observed at the project site. In addition, no ground squirrel burrows or other burrows suitable for owls occurred at the property. However, habitats for Burrowing Owls are ephemeral, as they are created and maintained by transient fossorial animals, such as ground squirrels, and the project site conditions could change over time. The potential presence of Burrowing Owls on the project site could change prior to pre-grading or construction activities, therefore the impact would be considered significant unless mitigated. However, the

Burrowing Owl Survey recommends a follow-up survey be conducted if site development does not occur within 3 months (December 31, 2004). If Burrowing Owls were observed at the project site, mitigation measures would require off-site habitat protection and enhancement at a 1:1 acreage replacement ratio, therefore, the impact would be considered less than significant with mitigation.

b) Does the project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? NI.

c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly? LS/M.

Impact III-d-1. The project site is located adjacent to the former Great Western Chemical site which, according to the Phase I/II Environmental Site Assessment, is identified as a site of potential environmental concern due to contaminated groundwater with tetrachloroethene (PCE), trichloroethene (TCE) and daughter products. As ongoing mitigation, groundwater containing PCE/TCE solvents extracted from the plumes are mitigated in the air-stripping/carbon polish system treatment plant, which could be a potential health risk hazard to the project site by emissions to the atmosphere from the operation of the groundwater remediation air striping system. However, the Bay Area Air Quality Management District (BAAQMD) regulates and oversees monitoring of the treatment plant. In addition, the BAAQMD requires emissions levels be maintained so that no solvent exposure will exceed the human health risk standards, therefore, the impact is anticipated to be less than significant.

Impact VII-a-1: The project site is developed with an approximately 57,000 square foot industrial building, originally constructed in 1958, which the applicant is proposing to demolish. According to the Phase I/II Environmental Site Assessment by the Denali Group, submitted by the applicant, limited samplings revealed the presence of lead-base paint on the existing structure. Construction activities proposed by the project may involve use and transport of hazardous materials, including contaminated soil and/or groundwater, and building demolition debris containing lead and asbestos. Removal, relocation, and transportation of hazardous materials could result in accidental releases or spills, potentially posing heath risk to workers, the public, and environment, therefore the impact would be considered significant unless mitigated. However, an addendum (dated September 17, 2004) to the Phase I/II ESA recommends the applicant follow demolition guidelines requiring testing for asbestos and lead-based paint prior to demolition in order to mitigate environmental exposure and to segregate the hazardous materials from non-hazardous construction debris. In addition, if lead-based paint or asbestos is identified, Bay Area Air Quality Management District, as well as Federal and State construction regulations shall be followed during construction activities. Therefore, with lead/asbestos testing, demolition guidelines, and applicable regulations, the impact would be reduced to a level considered less than significant with mitigation.

Impact VII-b-1: The proposed project site is located in an existing industrial park developed with businesses such as King Stucco, Floor Seal, US Filter and HK Tooling & Design. The applicant is proposing to operate an animal facility in an existing heavy industrial building which could subject the public and sensitive receptors (children and elderly) to hazardous materials in the event of an accidental release. According to a risk assessment submitted by the applicant, there are 2 facilities within ¼ mile of the project site that contain or use hazardous

materials in excess of threshold planning quantities, therefore the impact would be considered significant unless mitigated. However, the Milpitas Fire Department recommends the applicant preparation of an Emergency Action Plan (Plan) that incorporates training, evacuation plan, and shelter-in-place program. In addition, the Milpitas Fire Department recommends the installation of an approved wind/weather monitoring device. Therefore, with these programs in place, the impacts would be reduced to a level of less than significant with mitigation incorporation.

MITIGATION MONITORING PROGRAM

HUMANE SOCIETY OF SILICON VALLEY, EA2004-8
"S" ZONE APPROVAL NO. SZ2004-3, USE PERMIT NO. UP2004-7

Mitigation Measure	Implementation, Responsibility & timing	Monitoring Responsibility	Shown on Plans	Verified Implement.	Remarks
Mitigation Measure IV-a-1: *Commencing on January 1, 2005, within 30 days prior to any grading, discing for fire or weed control, or site improvement permit issuance, the applicant shall submit to the Planning Division a Western Burrowing Owl survey performed by a qualified ornithologist. The survey shall be valid for 30 days, after which time a new survey will be required prior to any site/soil disturbance. The purpose of the survey is to locate any individual or owl pairs presently on-site and to be sure that they are included in subsequent mitigation efforts. Impacts to burrowing owls shall be mitigated through the protection and enhancement of off site habitat at a 1:1 acreage replacement ratio. The mitigation plan shall be submitted to the Planning Division for approval and to the Department of Fish & Game as a courtesy. No grading or construction activity within habitat areas shall be allowed until the mitigation plan has been approved by the City Planning Division and the applicant has agreed to the mitigation measures or until such time as the applicant has entered into an agreement with the City to mitigate this impact, through a legal document approved by the City Attorney; this may include participation in a Citywide mitigation program. If so desired, the applicant may choose to enter into a mitigation agreement with the California Department of Fish & Game in lieu of an agreement with the City. The City shall accept a mitigation agreement between the applicant and DF&G as full compliance with the requirement for mitigation of burrowing owl habitat loss.*	*Responsibility:* Applicant *Timing:* Within 30 days prior to the start of any construction activities, commencing after January 1, 2005.	*Responsibility:* Planning Division	initials date	initials date	
Mitigation Measure VII-a-1: *Prior to demolition permit issuance or any pre-demolition activities, an asbestos and lead-based paint survey shall be performed.*	*Responsibility:* Applicant *Timing:* Prior to issuance of demolition permit	*Responsibility:* Planning Division	initials date	initials date	

EXHIBIT 2

Mitigation Measure VII-a-2: *Prior to condition of approval for any demolition activity, if asbestos-containing materials are determined to be present, the materials shall be abated by a certified asbestos abatement contractor in accordance with the regulations and notification requirements of the Bay Area Air Quality Management District. If lead-based paint is identified, then federal and State construction worker health and safety regulations shall be followed during renovation or demolition activities. If loose or peeling lead-based paint is identified, it shall be removed by a qualified lead abatement contractor and disposed of in accordance with existing hazardous waste regulations. In addition, if lead-based paint is identified, a contamination mitigation plan shall be submitted to and approved by the Department of Toxic Substance.*	*Responsibility:* Applicant *Timing:* Prior to issuance of any building or demolition permits	*Responsibility:* Building Division	initials date	initials date	
Mitigation Measure VII-b-1: *Prior to occupancy, the Emergency Action Plan (EAP) shall be revised to include identification of key personnel in the implementation of the plan, training documentation, written evacuation plan showing evacuation routes, shelter in place and assembly areas, and location of emergency equipment. Once the Emergency Action Plan has been completed it shall be submitted to the Milpitas Fire Department for review for completeness prior to implementation.*	*Responsibility:* Applicant *Timing:* Prior to certificate of occupancy	*Responsibility:* Fire Department	initials date	initials date	
Mitigation Measure VII-b-2: *Before implementing the Emergency Action Plan, the employer shall designate and train a sufficient number of persons to assist in the safe and orderly emergency evacuation of employees.*	*Responsibility:* Applicant *Timing:* Prior to certificate of occupancy	*Responsibility:* Fire Department	initials date	initials date	
Mitigation Meausre VII-b-3: *A drill utilizing all employees in their functions in the Emergency Response Plan, shall be scheduled and completed in the presence of the fire department prior to occupancy. This drill is to be completed on an annual basis. Also, monthly drills shall be conducted on site with Humane Society staff. All training drills shall be documented.*	*Responsibility:* Applicant *Timing:* Prior to certificate of occupancy	*Responsibility:* Fire Department	initials date	initials date	
Mitigation Measure VII-b-4: *A windsock or other approved wind/weather monitoring device shall be placed on site to aid in determining wind direction in the event of a nearby hazardous material release.*	*Responsibility:* Applicant *Timing*: Prior to certificate of occupancy	*Responsibility:* Fire Department	initials date	initials date	

H.T. HARVEY & ASSOCIATES
ECOLOGICAL CONSULTANTS

August 31, 2004

Christine Benninger
Humane Society Silicon Valley
2530 Lafayette Street
Santa Clara, CA 95050
FAX: 408.727.7845

Re: Humane Society Milpitas Conditional Use Permit Burrowing Owl Assessment

Dear Christine:

Per your request, on 31 August 2004, Wildlife Ecologist Laird Henkel, M.S., conducted a reconnaissance-level survey for Burrowing Owls (*Athene cunicularia*) at the site of the proposed Humane Society facility at 901 Ames Avenue, in Milpitas. The purpose of this survey was to identify any Burrowing Owls, or any potential habitat for Burrowing Owls.

The parcel is approximately 5 acres, of which about 2.2 acres are undeveloped. The undeveloped portion was disked on 20 May 2004 (per Scott Merry, Meracon Corportation). This undeveloped portion of the property is surrounded by developed lots. It is unvegetated except for some a few non-native trees and other ornamental vegetation on the north and south sides of the lot. No Burrowing Owls or secondary evidence of their presence (*e.g.*, feathers, castings, prey remains) were observed. In addition, no ground squirrel burrows or other burrows suitable for owls occurred at this property. Because the site is inconsistent with potential Burrowing Owl habitat, additional surveys are not warranted, per the protocol established by the California Department of Fish and Game.

Please be advised that habitats for Burrowing Owls are ephemeral, as they are created and maintained by transient fossorial animals such as ground squirrels. For this reason, conditions could change over time. We recommend that follow-up surveys be conducted if site development does not occur this year.

Please phone if you require additional information, or if we may be of further help.

Sincerely,

David L. Plumpton, Ph.D.
Associate Ecologist

CC: Kim Duncan (FAX: 408.586.3293)
Scott Merry (FAX: 760.944.0981)
George Miers (FAX 925.631.6910)

Proj. #2427-01

Earth Systems Consultants
Northern California

47853 Warm Springs Blvd.
Fremont, CA 94539-7400
(510) 353-0320
FAX (510) 353-0344

File No. FRE-5267-02
August 26, 2004

Doc. No. 0408-065

Humane Society Silicon Valley
2530 Lafayette Street
Santa Clara, California 95050-2602

Attention: Ms. Christine Benninger

Subject: New Humane Society Silicon Valley Facility
901 Ames Avenue
Milpitas, California
RISK APPRAISAL SITE ASSESSMENT ADDENDUM
UP2004-7, SZ2004-3

Dear Ms. Benninger:

In accordance with a request by Mr. Scott Merry of MERACON Corporation on your behalf, Earth Systems Consultants Northern California (ESCNC) has completed an Addendum of our Risk Appraisal Site Assessment, dated May 17, 2004, for the proposed new Humane Society Facility located at 901 Ames Avenue, Milpitas, California. This is in response to the request from the City of Milpitas review and comments letter, dated June 2, 2004, faxed to us by Mr. Merry on August 16, 2004.

Attached is Milpitas Humane Society Offsite Consequence Analysis, signed by Clint Skinner, Ph.D., DABT. This includes the responses to the worst-case release of hydrochloric acid (Fire Department comment #1) and the revised plume model (Fire Department comment #2).

As stated in our report and as confirmed by calls to the City of Milpitas Fire Department, the Emergency Action Plan (Fire Department comment #3) cannot be completed at this time. We are expecting to be able to complete the plan prior to occupancy, once contact personnel are

hired, phone numbers are assigned by the phone company, and other emergency contact information is known. The original mock-up is included in our previous submittal to the City.

It has been our pleasure to be of service to you on this project. Should you have any questions, or if we can be of further service, please contact our office.

Very truly yours,

EARTH SYSTEMS CONSULTANTS
Northern California

Lisa Gentry
Staff Geologist

Gary Pischke
Senior Geologist
Registered Environmental Assessor 4365
Certified Engineering Geologist 1501

LFG/GP: gwDisk004.121

Attached: Milpitas Humane Society Offsite Consequence Analysis

Distribution: 1 to Humane Society Silicon Valley, Attn: Christine Benninger
2 to City of Milpitas
1 to Meracon, Attn.: Scott Merry
2 to Miers Associates, Attn.: George Miers

S/A Skinner Associates

MILPITAS HUMANE SOCIETY OFFSITE CONSEQUENCE ANALYSIS

By:

Clint Skinner, Ph.D., DABT
Skinner Associates
3985 Shooting Star Rd.
Creston, CA. 93432

Clint Skinner_____

For:

Lisa Gentry
Earth Systems Consultants
47853 Warm Springs Boulevard
Fremont CA. 94538

Revised
August 24 2004

SKINNER ASSOCIATES
CONSULTANTS IN TOXICOLOGY

MILPITAS HUMANE SOCIETY OFFSITE CONSEQUENCE ANALYSIS

By:

Clint Skinner, Ph.D., DABT
Skinner Associates
3985 Shooting Star Rd.
Creston, CA. 93432

Clint Skinner (Clint Skinner)

For:

Gary Pischke/Lisa Gentry
Earth Systems Consultants
47853 Warm Springs Boulevard
Fremont CA. 94538

Revised
August 24 2004

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Executive Summary

Site Investigation: The following Revised Hazmat Release Consequence Dispersion Modeling was evaluated for the Proposed Humane Society pm 901 Ames St Milpitas from hazmat releases from nearby businesses which store possible RMP listed substances including HCl and NaOH (960 Ames) and methacrylates (1005 Ames).

Assessment Methods: Guidance was provided by the Milpitas Fire Department and the California Accidental Release Prevention Program (ARP) as well as the EPA RMP guidance. Dispersion modeling was performed using the EPA's SLAB model and guidance.

Hazard Assessment:

Three hazardous materials, HCl, methacrylates and NaOH, were identified in businesses within a quarter-mile radius of the Humane Shelter (HS) site on 901 Ames Avenue in Milpitas CA. Of these only HCL is listed by the EPA RMP and Cal ARP Accidental Release Prevention Programs and then only at a higher concentration (37% vs. 30%). HCl was evaluated because it is present in a large quantity and produces chlorine gas. Methacrylate is not listed by Cal ARP or EPA but since it has an IDLH value and more volatility than HCl, it was also evaluated. NaOH is not listed by EPA or Cal ARP for offsite consequence modeling because it has a very low vapor pressure and is a solid at room temperature.

Therefore, HCL and methacrylate were evaluated using EPA's SLAB dispersion model for offsite concentrations. Concentrations were modeled using Cal ARP and EPA worse-case assumptions and defaults assuming complete release of largest onsite containers and both worse and reasonable case meteorology in dispersion of vapors.
Methacrylate SLAB concentrations from indoor release were estimated at 40 ppm and 3.5 ppm for worse and reasonable case and 48 and 4.7 ppm with outdoor release. These values were less than the 400 ppm $1/10^{th}$ IDLH limit. No Toxic Endpoint values were given for methacrylate.

Modeling the indoor release of HCl generated a worse-case maximum concentration at the impact zone in the Humane Shelter building of 1370 ppm and a reasonable-case concentration of 112 ppm. For outdoor release these values were 1980 and 158 ppm, respectively. The hazard ratio based on $1/10^{th}$ the IDLH value of 5 ppm, with outdoor release and reasonable-case meteorology was 35 times. The ratio for indoor release was only 22 times. With worse-case meteorology, the ratio for outdoor release was 434 times and with indoor release was 314 times.

However, an important mitigating factor for HCL release is time to maximum concentration, estimated at almost 18 hours for all scenarios. This result is a consequence of the low emission rate of chlorine gas from an aqueous pool with its moderate vapor pressure (13 mmHg) and it assumes no clean-up. This should afford considerable time to evacuate with safety measures and clean-up. This may be part of the reason HCL concentrations under 37% do not require Federal offsite consequence modeling-provided here for informational purposes.

MILPITAS HUMANE SOCIETY OFFSITE CONSEQUENCE ANALYSIS

By Skinner Associates – May 8, 2004: Revised 8/24/04

1.0 Introduction

The following is a Revised Offsite Consequence Analysis impacting the Milpitas Humane Society Site performed for Earth Systems Consultants of Northern California for the city of Milpitas. Two tables and two figures were added to improve visualization of concentrations relative to IDHL levels at regular plume distances from the source with indoor and outdoor release.

2.0 Description of Facilities

The Humane Society (HS) facility site is located at 901 Ames in Milpitas California. At 76 meters, door to door, from the Humane Society (HS) site is US Filter at 960 Ames, which stores as the largest vessel 7000 gallons of HCl at 31%, and a 4300 gallon vessel of 50% NaOH. At 1005 Ames, Floor Seal stores 650 gallons of methyl methacrylate with the largest containers at 55 gallons. The Non-Waste Hazardous Materials Inventories for these operations are in Appendix A.

2.1 Description of Impact Area

Distances for modeling include:

Indoor Accident Distance- (m)
US Filter tanks to HS building – 106
Floor Seal tanks to HS building –200
Outside Accident Distance- (m)
US Filter tanks to HS building – 76
Floor Seal tanks to HS building –171

3.0 Emission of Hazardous Substances

As discussed by CalARP (Aug 28 2003 pg 38) and EPA RMP (April 1999-2.1) The IDSPL-1 or pool mode is used for toxic liquids to represent an immediate spill release of all contents in largest containers and evaporation from a pool. One alternative reasonable-case scenario was also required for each chemical. For this alternative scenario, meteorology data from 90-93 from the nearest weather station in Alviso was compiled by James Cordova of the Bay Area Air Quality Management District (415) 749-5104 and means and maxima found for the roughly 8000 yearly data points using Excel. (Table 2.)

3.1 Emission Evaluation-Input in SLAB

EPAs Dense Gas Simulation Model SLAB calculates dispersion of dense gas releases from area sources. It can model pool, jet (valve failure) and instantaneous releases or puff. It does not calculate source emission rates but can accept these as mass source rate in kg/sec for pools and jets

and instance source mass (QTIS) for instant release or puffs. Table 1.0 contains all inputs for the model and output in ppm at the HS site.

Spill Types 1) pool 2) Horizontal jet 3) Vertical jet and 4) puff. These input symbols are provided with explanations of each input parameter and input values for each scenario in Table 1.

For **Source Properties** of the chemicals the SLAB Manual Table 2.0 was used for chlorine as a gas generated by spilling HCL solutions. The EPA HSDB was used for methacrylate physical data together with Reid et. al. (1982).

1) For **Spill Parameters:** Temperature (TS) was the CalARP ambient worse-case (310 K), mass source rate (QS) in kg/sec and instant source mass (QTIS) in kg were defined by EPA RMP (April 1999) and CalARP (2003). The source area of spill pool (AS) is defined as a pool 1 centimeter deep. Equation 3-3 calculates the QS emission to air which is used to calculate the continuous source duration TSD. The pool HS or height source is ground level or zero.

Scenarios Modeled:

1) Toxic liquids at ambient temperature:

A) HCL. For toxic liquids it is assumed that the entire quantity of the largest container is spilled instantaneously to form a liquid pool. (CalARP pg. 38, EPA RMP pg 3-4). Emission is calculated with methods in EPA RMP manual D2. The 10-minute average vapor pressure for 30% solution is assumed 13 mm Hg (EPA RMP B-3) with a density factor of 0.42 and a wind rate of 1.5 m/s.

NOTE: Although according to EPA RMP Table B-3 HCl concentrations below 37% are not regulated, this 7000 gallon tank may be large enough to pose a risk to the HS site.

Emission Rate: For toxic liquid spills the release rate to air is given by EPA RMP Equation 3-3:

QR = QS x 1.4 x FA x DF

Where:
QR = Release rate to air in pounds per minute
QS = Quantity released (pounds)
1.4 = Wind Speed factor
LFA = Liquid Factor Ambient (from Ex. B-2 of Appendix B)
DF = Density Factor (from Ex. B-2 of Appendix B)

For HCL:

QS = 7000 gallons x 8.4 lb. /gal x 1.16 density = 68208 lbs
LFA = 0.0016 (B-2) (Based on 30%)
DF = 0.42 (B-2) (Based on 30%)
QR = 68208 lbs x 1.4 (wsf) x 0.0016 (LFA) x 0.42 (DF)= 64.2 lbs/min

/ 2.2 = 29.2 kg/min / 60 = **0.486 kg/sec**

AS or source area (m2) was calculated using the formula (3-6) in EPA ARP.
A=QS x DF

Where:
A = maximum area (ft2) of pool with depth 1 cm
QS = Quantity released (pounds) = 68208 lbs
DF = Density factor = 0.42 (B2)
AS = 68208 x 0.42 = 14324 ft2 x 0.093 (ft2 m2) = **2664 m2**

The TSD or constant source duration for HCL is 68208 lbs. spilled = 31004 kg / 0.243 kg/sec emission rate = **127586 seconds** = 2126 minutes = 35 hrs.

B) Me. Methacrylate: Not regulated by EPA RMP or Cal ARP. Using EPA RMP generic evaporation formula (D-1)

$$QR = \frac{0.284 \times U^{0.78} \times MW^{2/3} \times A \times VP}{82.05 \times T}$$

Where:
QR = Evaporation rate (lbs/min)
U = Wind speed (m/s)
MW = Molecular Weight
A = Surface area of pool (ft2) (3.2.2)
VP = Vapor pressure (mm Hg)
T = Temperature of released substance (K)

For Me. Methacrylate:

U = 1.5 (m/s)
MW = 101.12 (HSDB)

A = QS x DF (3.6)

Where:
QS = quantity released= 55 gal x 3.785 l/gal x 0.9440 kg/l x 2.2 lb/kg = 432.34 lbs
DF = Density factor for acrylyl monomer = 0.42

A = 432.34 lb x 0.42 DF = **182 ft2** x 0.093 m2/f2 = **16.89 m2**

VP = vapor pressure = 38.5 mm Hg (HSDB)
T = temperature of released substance = 310K

QR = $(0.284 \times (1.5)^{0.78} \times (101.12)^{2/3} \times 182 \times 38.5) / (82.05 \times 310)$ = 2.33 lbs/minute = 1.1 kg/minute / 60 = **0.0184 kg/sec**

TSD or constant source duration for Me. Methacrylate is 55 gal in tank x 3.785 l/gal x 0.9440 kg/l = 197 kg / 0.018 kg/sec = **10944 sec = 182 minutes**

3) Toxic solids: NaOH. No guidance for solids or NaOH was found in CalARP List of Chemicals (pg 104) or EPA RMP guidance as Regulated Substance for Accidental Release Prevention 40CFR68 App. F pg 58.

Field Parameters included TAV concentration time of 10 seconds, maximum downwind distance of 1000 meters to calculate concentrations at and beyond the HS site; and ZP or height concentration calculation using the breathing zone 1.6 meter height.

Meteorological Parameters were the CalARP (2003 pg 35) mandated worse-case and for reasonable-case typical 4 yr Alviso mean case (Table 2.0). Worse-case default windspeed (UA) default was 1.5 m/s vs. 1.8 from Alviso data; EPA maximum onsite temperature (TA) = 37C (310K) vs. mean of 286; Relative Humidity, EPA requires 50% relative humidity (RH) compared to an actual mean of 61%; stability class (STAB) EPA default is 6 or (F) stable versus a 4 year Alviso mean of 2.82, surface roughness (ZO) was used from Alviso data.

3.2 Output Calculations:

Table 1.0 Concentration on Site (ppm) gives worse-case and reasonable-case estimated ppm concentrations at the HS building in ppm for releases inside and outside of the buildings. Distances in meters to $1/10^{th}$ IDLH and Cal ARP and EPA Toxic Endpoint levels are also given. Table 3.0 contains the SLAB input and results for HCL. Input is page 11 and 23 and output are page 22 and 35. Table 4.0 contains the printout for methacrylate with input on page 37 and 50 and output on page 48 and 61.

The first group of data is input with definitions for each parameter and the values used. The output ends with "time averaged (tav = 10. s) volume concentration: maximum concentration (volume fraction) along centerline." The 5 column output contains: Downwind distance in meters , height, maximum concentration, time of maximum concentration (s) and cloud duration (s). The second group of data begins with the input from the reasonable-case run and ends with the same output. Time to maximum is also entered in Table 1 below the concentrations for inside and outside release. Since the distances were similar, the time to maximum for the inside and outside release were not different but were for worse versus reasonable case.

4.0 Regulatory Toxicology Profile of Materials

Hydrogen Chloride: Listed on EPA and CalARP RMP lists over 37%. 960 Ames reported level of 31%. Forms chlorine gas with pungent irritating odor. The lowest concentration posing a risk of lethality is 3000 ppm based on human data. The CalARP toxic Endpoint is 20 ppm for HCL and 3 ppm for chlorine. The current NIOSH Immediately Dangerous to Life and Health (IDLH) limit of 50 ppm (8/16/96) is based on human and animal acute toxicity data including ability to work in 50-100 ppm. http://www.cdc.gov/niosh/idlh/7647010.html

Methyl methacrylate: Vapor is colorless liquid with acrid, fruity odor. The lowest concentration posing a risk of lethality is 7115 ppm based on mouse data. The current NIOSH Immediately Dangerous to Life and Health (IDLH) limit of 1000 ppm (8/16/96) is based on human and animal acute toxicity data including ability to work in 200 ppm but not at 2000 ppm. http://www.cdc.gov/niosh/idlh/80626.html

Sodium Hydroxide: Not on Federal or State RMP lists of regulated substances. Very low vapor pressure (1 mmHg @ 739C) (HSDB). Substance is solid at room temperature. Present in solutions

@ 50% is strongly alkaline. No inhalation data is available. The NIOSH Immediately Dangerous to Life and Health (IDLH) limit of 10 mg/m3 based on mouse i.p. data (8/16/96). Workplace concentrations of 2-8 mg/m3 associated with respiratory irritation.
http://www.cdc.gov/niosh/idlh/1310732.html.

5.0 Risk Characterization

As seen in Table 1.0, the estimated concentration of each chemical using worse-case release and meteorology produced estimates roughly ten to 30-times higher at the Humane Society building than those using the reasonable-case meteorology. The estimated worse-case concentrations in the building for the indoor release at the tanks was for HCL worse-case; 1390 ppm and reasonable-case; 112 ppm. For HCL release from outdoors worse case was 1930 ppm and 158 ppm. All these values are above the 1/10th IDLH limit of 5 ppm and the Cal ARP and EPA Toxic Endpoint limit of 20 ppm. Distance from release to the 1/10th IDLH limit was 14,000 meters for the worse-case scenario and 1160 meters for the reasonable-case. Distance from release to the ARP endpoint was 4000 meters for worse-case and 410 meters for reasonable case. For methacrylates the indoor release worse-case estimate was 40 ppm and reasonable case was 3.5 ppm. The outdoor release worse-case estimate is 48 ppm and reasonable case is 4.7 ppm. None of these values are above the 1/10th IDLH limit of 400 ppm. The distance to the 400 ppm limit from an indoor release was 24 meters for worse-case and 8 meters for reasonable-case. These safe distances are all for indoor releases to the HS building which is a distance of 106 meters for HCL and 200 meters for methacrylate. Time to maximum at the HS site for methacrylate was estimated at 5560 seconds (1.5 hours).

As seen in Table 3.0, and Figure 1, the hazard ratio (concentration / 1/10th IDLH) for HCL with outdoor release and reasonable-case meteorology was 35 times the 5 ppm reference concentration. This ratio for indoor release (Figure 2) was only 22 times. With worse-case meteorology, the ratio for outdoor release is 434 times and with indoor release (Figure 4) it was 314.

6.0 Conclusion

Three hazardous materials, HCl, methacrylates and NaOH, were identified in businesses within a quarter-mile radius of the Humane Shelter site on 901 Ames Avenue in Milpitas CA. Of these only HCl is listed by the EPA RMP and Cal ARP Accidental Release Prevention Programs. In fact, HCl is not listed at the 30% concentration but only above 37%. But it was evaluated because it is present in a large quantity and produces chlorine gas. Methacrylate is not listed by EPA or Cal ARP but since it has an IDLH value and is more volatile than HCl (38 vs 13 mm Hg @25C) it was evaluated. NaOH is not listed at all because it has a very low vapor pressure (1 mmHg at 739 C which is 1,362.20 F) and is a solid at room temperature. Therefore, HCL and methacrylate were evaluated using EPA's SLAB dispersion model for offsite concentrations.

Methacrylate concentrations from indoor release were 40 ppm and 3.5 ppm for worse and reasonable case and 48 and 4.7 ppm with outdoor release. These values were less than the 400 ppm 1/10th IDLH limit. No Toxic Endpoint values were given for methacrylate.

The mazimum concentration hazard ratio for HCL with outdoor release and reasonable-case meteorology was 35 times the 5 ppm reference concentration. This ratio for indoor releasewas only 22 times. With worse-case meteorology, the ratio for outdoor release is 434 times and with indoor release it was 314.

However, an important mitigating factor for HCL release is time to maximum concentration, estimated at almost 18 hours for all scenarios. This result is a consequence of the low emission rate of chlorine gas from an aqueous pool with its moderate vapor pressure (13 mmHg) and it assumes no clean-up. This should afford considerable time to evacuate with safety measures and clean-up. This may be part of the reason HCL concentrations under 37% do not require Federal offsite consequence modeling-provided here for informational purposes.

If mitigation measures are required, those provided in the OES CalARP (August 28 2003) Office of Emergency Services California Accidental Release Prevention Program Administering Agency Guidance should be used.

7.0 References

OES CalARP (August 28 2003) Office of Emergency Services California Accidental Release Prevention Program Administering Agency Guidance
http://66.102.7.104/search?q=cache:p3jvG0dLRtoJ:www.oes.ca.gov/Operational/OESHome.nsf/PDF/CalARPguidance828pdf/%24file/guidance.pdf+calarp+administering+agency+guidance&hl=en

User's Manual for SLAB: An Atmospheric Dispersion Model for Denser Than Air Releases (June 1990) D.E. Ermak, Lawrence Livermore National Lab. On EPA SCRAM website.

EPA CEPP (April 1999) Risk Management Program Guidance for Offsite Consequence Analysis. US Environmental Protection Agency Office of Solid Waste and Emergency Response. http://yosemite.epa.gov/oswer/ceppoweb.nsf/content/EPAguidance.htm

HSDB (2004) EPA Hazardous Substance Data Base. http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB

RISK APPRAISAL
SITE ASSESSMENT

901 Ames Avenue
Milpitas, California

MAY 2004

Prepared for

Humane Society Silicon Valley
2530 Lafayette Street
Santa Clara, California 95050

Prepared by

EARTH SYSTEMS CONSULTANTS
Northern California
47853 Warm Springs Boulevard
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File No. FRE-5267-02
May 17, 2004

Doc. No. 0405-044

Humane Society Silicon Valley
2530 Lafayette Street
Santa Clara, California 95050

Attention: Ms. Christine Benninges

Subject: 901 Ames Avenue
Milpitas, California
REVISED RISK APPRAISAL SITE ASSESSMENT

Dear Ms. Benninges:

Earth Systems Consultants Northern California (ESCNC) is pleased to present the findings of this Revised Risk Appraisal Site Assessment. This assessment was conducted to identify areas of environmental concern, which may be a result of past or present usage, handling, incidences, or storage of hazardous materials on or near the subject site, and to evaluate and model scenarios related to selected chemical releases in the local area. The scope of work performed for this assessment was based on the City of Milpitas Risk Appraisal Guidelines. The risk appraisal site assessment included a review of: site usage, surrounding site usage, regulatory databases, City of Milpitas Fire Department records search, and comments received from the City review.

ESCNC concludes that the potential for environmental impact on the property is low, since each scenario is a worst case improbable or low probability event. Light industrial businesses surround the existing site. The site is directly surrounded by only small amounts of hazardous chemicals such that a chemical release would have a low probability of reaching limits above the safety threshold, 1/10 of Immediately Dangerous to Life and Health (IDLH) concentrations for each chemical.

We have included the worst case scenarios for two chemicals with IDLH levels that could affect the subject site. The worst case is from a reaction with HCl forming chlorine gas. The Emergency Action

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May 17, 2004

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Plan has been tailored to fit this worst case scenario. The risk assessment for these chemicals has been included as an attachment.

We appreciate this opportunity to be of service. Should you have any questions or comments regarding this report, please feel free to contact us.

Very truly yours,

EARTH SYSTEMS CONSULTANTS
Northern California

Lisa Gentry
Staff Geologist

Gary Pischke
Senior Geologist
Registered Environmental Assessor 4365
Certified Engineering Geologist 1501

LFG/GP: gwDisk004.117

Distribution: 1 to Humane Society Silicon Valley
2 to City of Milpitas
1 to Meracon, Attn.: Scott Merry
2 to Miers Associates, Attn.: George Miers

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APPENDICES

File No. FRE-5267-02
May 17, 2004

Doc. No. 0405-044

REVISED RISK APPRAISAL SITE ASSESSMENT

PROJECT: 901 Ames Avenue
Milpitas, California

CLIENT: Humane Society Silicon Valley
Santa Clara, California

INTRODUCTION

This Revised Risk Appraisal Site Assessment was performed at the request of Scott Merry, with Meracon, for the site located at 901 Ames Avenue in Milpitas, Santa Clara County, California (Figure 1). The purpose of this assessment was to evaluate areas of environmental concern, which may be a result of past or present usage, handling, incidents, or storage of hazardous materials on or near the subject site, and to evaluate scenarios of large scale incidents and their potential for causing levels at 1/10 of Immediately Dangerous to Life and Health (IDLH) conditions on the subject site. The scope of work performed for this assessment was based on the City of Milpitas Draft Risk Appraisal Guidelines document, and included a reconnaissance of the subject property, review of past and present site uses, surrounding site usage, chemical storage, past incidents of chemical release, and City of Milpitas Fire Department (MFD) records review. Enclosed with this report are a Site Location Map (Figure 1), Site Map (Figure 2), Adjacent Property Map (Figure 3), Hazardous Materials Inventory Lists (Appendix A), and a copy of the EDR Environmental Data Resources, Inc. (EDR) report used to assist in locating potential sources of environmental risk (Appendix B). This revised Risk Appraisal includes plume modeling for the worst case scenario from two offsite sources. The locations of the sources are shown in Figure 4. The results and calculations from the plume modeling are included in Appendix C.

Site Description

The subject site (APN 086-31-006) is comprised of approximately 5 acres for the proposed new Humane Society Silicon Valley Facility. The site is located on the Milpitas, California 7.5 minute topographic quadrangle (U.S. Geological Survey, 1991) (see Figure 1 – Site Location Map). The site is at an elevation of approximately 50 feet above mean sea level in the city of Milpitas. It is bordered by commercial and industrial businesses on the east and west, Ames Avenue on the south, and railroad tracks with commercial/industrial properties on the north (Figure 2). The site area is relatively flat and at the time of our investigation: a plowed field, a driveway with asphaltic concrete parking and an existing approximately 58,000 square foot commercial building occupied the northern portion of the site area. A few mature trees and shrubs line the parking area, with a few mature trees at Ames Avenue. Grasses and weeds cover a large open and disked area between the existing building and the street and cover the old railroad tracks at the back of the building.

Project Description

It is anticipated that the new Humane Society facility building will be constructed in the north and east portions of the site, now occupied by a structure planned to be removed, a driveway with parking, an abandoned railroad track and empty field. Proposed dog play areas with walkways, parking areas and driveways will cover the rest of the site. It is our understanding that the existing building, driveways and walkways with some of the trees and landscaping will be removed prior to construction of the proposed subject Humane Society building and related facilities. No basements or parking structures are planned for the project.

City of Milpitas Requirements

Part of the City of Milpitas requirements for this project included a Risk Assessment Report. Part of the guidelines for the report included identifying land use in the area of the project, identifying neighboring businesses and types of activities within 1/4 mile of the subject property, and review of chemicals of concern within 1/4 mile radius, to 1/2 mile radius. Once chemicals of concern have been identified, it was required to assess the potential risks and worst case

scenarios of a hypothetical chemical release, and to calculate Immediately Dangerous to Life and Health (IDLH) chemical concentrations within the project area. This worst case scenario is included in this revision for two sites adjacent to the subject site. An Emergency Action Plan (Appendix E) was also requested by the city of Milpitas, to be completed prior to occupancy.

SITE RECONNAISSANCE AND RECORDS REVIEW

On March 10, 2004, an ESCNC geologist performed a reconnaissance of the subject site and adjacent properties. The geologist also reviewed the records at the City of Milpitas Fire Department on the same day. The intent of the reconnaissance was to document locations of near site sources and gather visual evidence of possible contamination resulting from the an incident of disastrous proportions of hazardous materials on or within 1/4 mile of the subject site.

Adjacent Properties

Land use in the site vicinity is predominantly commercial and light industrial. To the north is an old railroad track with Larson Pallet on the opposite side. To the east is the Former Great Western Chemical Storage facility, now EMS, Environmental Management Services facility. To the south is Ames Avenue and across the street is US Filter facility. To the west is the R&M Paving Contractors facility (Figure 3). The City of Milpitas Fire Department (MFD) has 7 sites with existing Hazardous Materials Inventory Reports (Appendix A) within the required research limits and 2 within the potential research limits with sufficiently high enough amounts of stored hazardous materials to report. This revised risk assessment evaluates the two sites with sufficient amounts to potentially cause a worst case scenario at the subject site. According to EDR there are 33 HAZNET incidences on exiting or closed sites, within 1/4 mile radius of the subject site (Appendix B). The following is a list of the Hazardous Materials Inventory Statements received from the MFD and distances to the site (see Figure 3 for location map):

Table 1- Hazardous Materials Statements

Distance to Site	Facility Address	Facility Name
<1/8 Mile	1005 Ames Avenue	Floor Seal
<1/8 Mile	963 Ames Avenue	Quality Transformers and Electronics
<1/8 Mile	945 Ames Avenue	Former Great Western Chemical
<1/8 Mile	960 Ames Avenue	US Filter
<1/8 Mile	930 Ames Avenue	Nella Oil (Olympian Commercial Fueling Systems)
1/8 – 1/4 Mile	800 Ames Avenue	Balch Petroleum
1/8 – 1/4 Mile	1000 Yosemite Drive	Larson Pallet
1/8 – 1/4 Mile	1090 S. Milpitas Blvd	ABC Printing
1/8 – 1/4 Mile	690 Gibraltar Drive	Domain Technology
1/4 – 1/2 Mile	777 Gibraltar Drive	Solectron
1/4 – 1/2 Mile	755 Yosemite Drive	Bottomely Distributors
> 1/2 Mile	1029 Montague Expressway	McCabe Quality Foods

Summary of Chemicals Stored in Neighborhood

A. Floor Seal, 1005 Ames Avenue, <1/8 mile: This facility stores only mixed chemical liquids. The following chemicals stored at the site include a maximum of 400 gallons of Monocryl 205 (Methyl Methacrylate 2-ethylhexycacrylate), 150 gallons of Monacryl 203 (Methyl Methacrylate ethyxylated dara toluidine) and 100 gallons of Monacryl 101 (Methyl Methacrylate ethylene glycol). The rest of the potentially hazardous materials listed at the site are not in significant concentration as to have an effect offsite. Methyl Methacrylate is a flammable colorless liquid with an acrid, fruity odor that under prolonged and repeated exposure targets the eyes, upper respiratory system, and skin irritant. The IDLH level is 4000 ppm (parts per million). 1/10 of the IDLH is 400 ppm. To have offsite consequences, a substantial above ground spill is required to generate significant airborne vapor concentrations. (Methyl Methacrylate was included in the Plume Modeling, see Appendix C).

B. Quality Transformers & Electronics, 963 Ames Avenue, <1/8 mile: This facility stores pure and mixed chemical liquids and gases; a maximum of 630 cubic feet of

Ethyne/Acetylene liquid, and 281 cubic feet of carbon dioxide gas. The rest of the potentially hazardous materials listed at the site are not in significant concentration as to have an effect offsite. Acetylene is a pale yellow liquid with a pungent odor that under prolonged and repeated exposure targets the eyes, upper respiratory system, and liver. The IDLH level is 10 ppm. 1/10 of the IDLH is 1 ppm. To have offsite consequences, a substantial above ground spill is required to generate significant airborne vapor concentrations. Carbon dioxide is a colorless, odorless liquid or gas that under prolonged and repeated exposure targets the lungs, skin, and cardiovascular system. The IDLH level is 50,000 ppm. The 1/10 IDLH is 5,000 ppm. To have offsite consequences, a substantial release and continued wind direction is required to generate significant airborne vapor concentrations.

C. Former Great Western Chemical, 945 Ames Avenue, <1/8 mile: This facility stores a pure liquid chemical, a maximum of 350 gallons of sulfuric acid. This site is immediately adjacent to the eastern edge of the subject site. The storage area for the chemical is adjacent to the property line. Sulfuric acid is a colorless to dark brown, oily odorless liquid that upon exposure targets the respiratory system, eyes, skin and teeth. The IDLH level is 80 mg/m^3. 1/10 IDLH is 8 mg/m^3. To have offsite consequences, a substantial above ground spill is required to generate significant airborne vapor concentrations.

D. US Filter, 960 Ames Avenue, <1/8 mile: This facility stores pure and mixed chemical solids, liquids and gases; to a maximum of 7,000 gallons of hydrochloric acid, 4,300 gallons of sodium hydroxide liquid, 660 gallons of MINNCARE (hydrogen peroxide, peracetic acid, and acetic acid), and 165 gallons of quaternary ammonia (soap). The rest of the potentially hazardous materials listed at the site are not in significant concentration as to have an effect offsite. To have offsite consequences, a substantial above ground spill with violations is required to generate significant airborne vapor concentrations. Hydrochloric acid is a colorless gas with an irritating, pungent odor that upon exposure

targets the respiratory system, eyes, and skin. Its IDLH is 50 ppm, and 1/10 IDLH is 5 ppm. Hydrogen peroxide is a colorless liquid with a sharp smell that upon exposure targets the eyes, skin and respiratory system. It's IDLH level is 75 ppm, and 1/10 IDLH is 7.5 ppm. Quaternary ammonia is a soap product with a pungent odor, and is not regulated. Sodium hydroxide is a colorless, odorless solid that upon exposure that targets the eyes, respiratory system, and skin irritant. It's IDLH level is 250 mg/m^3, and 1/10 IDLH is 25 mg/m^3. Chlorine gas can be created from hydrochloric acid. (Sodium hydroxide and hydrochloric acid levels were also modeled, Appendix C).

E. Balch Petroleum, 930 Ames Avenue, <1/8 Mile: This facility stores pure and mixed chemical liquids and gases to a maximum of; 608 cubic feet of nitrogen tanks, 150lbs of carbon dioxide, 488 cubic feet of helium, 408 lbs of acetylene, 1,000 gallons of waste oil, 165 gallons of heavy duty motor oil, 6,000 gallons of gasoline and 14,000 gallons of diesel. The rest of the potentially hazardous materials listed at the site are not in significant concentration as to have an effect offsite. Acetylene is a pale yellow liquid with a pungent odor that under prolonged and repeated exposure targets the eyes, upper respiratory system, and liver. The IDLH level is 10 ppm, and 1/10 IDLH is 1 ppm. Propane is a colorless, odorless flammable gas that with prolonged exposure targets the central nervous system. It's IDLH level is 20,000 ppm, and 1/10 IDLH is 2,000 ppm. Carbon dioxide is a colorless, odorless liquid or gas that under prolonged and repeated exposure targets the lungs, skin, and cardiovascular system. The IDLH level is 50,000 ppm. The 1/10 IDLH is 5,000 ppm. Gasoline is a flammable liquid with a strong acrid odor used as a fuel product that often contains additives like benzene, toluene, ethyl benzene and xylenes (BTEX). Liquid nitrogen and helium are odorless, colorless gases that can be compressed into a liquid. Their most hazardous quality is sudden oxidizing which may promote rapid combustion of flammable gases or materials. To have offsite consequences, a substantial above ground spill or gas release with constant wind direction and velocity is required to generate significant airborne vapor concentrations at the subject site.

F. Nella Oil (Olympian Commercial Fueling Systems), 800 Ames Avenue, 1/8-1/4 mile: This facility stores gasoline and diesel; to a maximum of 10,000 gallons of mid-range gasoline, 10,000 gallons of regular gasoline, 6,000 gallons of super gasoline and 14,000 gallons of diesel. No other potentially hazardous materials were listed at the site. Gasoline is a flammable liquid with a strong acrid odor used as a fuel product that often contains additives like benzene, toluene, ethyl benzene and xylenes (BTEX). To have offsite consequences, a substantial above ground spill or gas release with constant wind direction and velocity is required to generate significant airborne vapor concentrations at the subject site.

G. Larson Pallet, 1000 Yosemite Drive, 1/8-1/4 mile: This facility stores pure and mixed chemical liquids and gases to a maximum of 132 cubic feet of acetylene and 499 gallons of propane gas. The rest of the potentially hazardous materials listed at the site are not in significant concentration as to have an effect offsite. Acetylene is a pale yellow liquid with a pungent odor that under prolonged and repeated exposure targets the eyes, upper respiratory system, and liver. The IDLH level is 10 ppm, and 1/10 IDLH is 1 ppm. Propane is a colorless, odorless flammable gas that with prolonged exposure targets the central nervous system. It's IDLH level is 20,000 ppm, and 1/10 IDLH is 2,000 ppm. To have offsite consequences, a substantial above ground spill or gas release with constant wind direction and velocity is required to generate significant airborne vapor concentrations at the subject site.

H. ABC Printing, 1090 S. Milpitas Boulevard, 1/8-1/4 mile: This facility stores pure and mixed chemical solids, liquids and gases to a maximum of 1 gallon or 0.0044 lbs. These amounts of potentially hazardous materials listed at the site are not in significant concentration as to have an effect offsite.

I. Devcon Construction, 690 Gibraltar Drive, 1/8-1/4 mile: This facility stores pure and mixed chemical liquids and gases to a maximum of 1,200 cubic feet of acetylene and 300 cubic feet of propane gas. The rest of the potentially hazardous materials listed at the site are not in significant concentration as to have an effect offsite. Acetylene is a pale yellow liquid with a pungent odor that under prolonged and repeated exposure targets the eyes, upper respiratory system, and liver. The IDLH level is 10 ppm, and 1/10 IDLH is 1 ppm. Propane is a colorless, odorless flammable gas that with prolonged exposure targets the central nervous system. It's IDLH level is 20,000 ppm and 1/10 IDLH is 2,000 ppm. To have offsite consequences, a substantial above ground spill or gas release with constant wind direction and velocity is required to generate significant airborne vapor concentrations at the subject site.

J. Solectron, 1/4-1/2 mile, 1177 Gibraltar Drive (actual address 777 Gibraltar Drive): This facility stores pure and mixed chemical liquids and gases to a maximum of 11,000 gallons of liquid nitrogen. The rest of the potentially hazardous materials listed at the site are not in significant concentration as to have an affect offsite. Liquid nitrogen is an odorless, colorless gas that can be compressed into a liquid. It's most hazardous quality is sudden oxidizing which may promote rapid combustion of flammable gases or materials.

K. Bottemly Distributors, 755 Yosemite Drive, 1/4-1/2 mile: This facility stores pure and mixed chemical liquids and gases; to a maximum of 125 cubic feet of acetylene, 1,000 gallons of propane, 5,000 gallons of gasoline and 10,000 gallons of diesel. The rest of the potentially hazardous materials listed at the site are not in significant concentration as to have an effect offsite. Acetylene is a pale yellow liquid with a pungent odor that under prolonged and repeated exposure targets the eyes, upper respiratory system, and liver. The IDLH level is 10 ppm, and 1/10 IDLH is 1 ppm. Propane is a colorless, odorless flammable gas that with prolonged exposure targets the central nervous system. It's IDLH level is 20,000 ppm, and 1/10 IDLH is 2,000 ppm. Gasoline is a flammable liquid

with a strong acrid odor used as a fuel product that often contains additives like benzene, toluene, ethyl benzene and xylenes (BTEX). To have offsite consequences, a substantial above ground spill or gas release with constant wind direction and velocity is required to generate significant airborne vapor concentrations at the subject site.

L. McCabe Quality Foods, 1029 Montague Expressway, >1/2 mile (requested to be reviewed by MFD, even though it is outside of the 1/2 mile radius requirement): This facility stores pure ammonia in liquid and gas to a maximum 8000 pounds. No other potentially hazardous materials were listed at the site. To have offsite consequences, a substantial above ground spill with violations is required to generate significant airborne vapor concentrations. Ammonia is a colorless gas with a pungent, suffocating odor that can be a liquid under pressure that with a small amount of exposure targets the respiratory system and eyes. It's IDLH level is 500 ppm, and 1/10 IDLH is 50 ppm. Ammonia, if released in large quantities, can be a major hazard, but is just over 1/2 mile from the subject site. Also, according to the Aloha calculations, (Appendix D, done for this site by others and copied from the MFD files) the plume will not reach the subject site, even if the wind direction were to dramatically change from the normal easterly wind direction. (This chemical will be discussed in Appendix C, Plume Calculations).

EDR and MFD Review

To facilitate the regulatory agency review, ESCNC requested a database search from Environmental Data Resources, Inc. (EDR). EDR conducted a search of 55 governmental databases in order to identify environmental violations, use and storage of hazardous materials, or reported loss of hazardous materials at the subject site and within a one-mile radius of the subject site. For a complete listing of the databases searched and facilities identified, please see the EDR report provided in Appendix B.

EDR identified multiple facilities within one-mile of the subject site. The facilities identified by EDR are listed in the attached report. Nine of the identified facilities and incidents were located

within 1/8-mile radius of the subject site. The EDR database was reviewed for hazardous waste or materials incidences that caused a significant release to the site or vicinity within 1/8 mile. According to the EDR report, the previous occupant of the subject site has listed six incidents on the HAZNET and one on the RCRIS databases. Four sites are on the CORTESE database; one site on CORRACTS; eight sites on RCRIS database; nine sites on LUST database; one site on the Notify 65 database; three sites on the CA-FID UST database; six sites on the CA-SLIC database; 33 incident listings on the HAZNET database; and one site on Brownfields database.

The sites with addresses listed were in general mapped down gradient of the site, except 7 sites.

Using the EDR report as a basis, a records review was requested of the MFD for surrounding sites that could environmentally impact the site in the case of a catastrophic event. We requested to review files for 33 sites, and found 7 sites within ¼ mile and 4 sites within ½ mile with Business Plans and Hazardous Materials Inventory Statements on file. MFD requested that we review the files for 1 site outside of the ½ mile radius. Post review of the Materials Inventory Statements, we determined that most of the chemicals stored at the surrounding sites were predominantly in too small of quantities to affect the subject site. Of the chemicals that were in large enough quantities, and close enough to the site, evaluation and modeling were performed to determine potential impact upon the site in the case of a catastrophic incident to get 1/10 of the IDLH levels at the site inside the building.

EDR Report Corrections

There were 2 reported CHMIRS (California Hazardous Materials Incidents Report System) and 33 HAZNET incident reports at 26 sites within 1/2 mile of the site, according to EDR. Of these incidents listed on the EDR report, 11 sites were found to have an existing Hazardous Materials Inventory Statement (HMIS) and Business Plan on file with the MFD. During the site visit, some of the listed HAZNET sites were found to have been closed where the building is currently vacant, or other businesses have moved into the property location and/or the HAZNET listed business is not in existence at the address location. Additionally, some addresses listed in the

EDR report were found to be mis-mapped in the field, and one site (Solectron) had an address listed on both the EDR report and the Cities HMIS that was not existent. The known and historical physical address for Solectron on the same street in Milpitas is listed and used in this report. During the site visit, the recorded Great Western Chemical site at 945 Ames Avenue adjacent to the subject site was observed to be occupied by EMS, Environmental Management Services. The location of the hazardous chemical storage in the MFD records appears to be the new driveway area for small vehicles and large trucks. The MFD records may not have been recently updated with the removal of the listed hazardous material at this address.

SCENARIOS AND EVALUATIONS

Some of the sites were not considered for a scenario due to the likely effect of the release being a possible fire and very high IDLH limits (ex: nitrogen gas). Of the sites considered, three worst case scenarios were developed considering the lowest IDLH levels and closest possible sources.

Gasoline

A worst case gasoline release would be located at 755 Yosemite Drive, approximately 1,700 feet northwest of the subject site. The tanks are kept near the back of the building a few hundred feet north of the street, further north of the site. This scenario assumes 5,000 gallons of gasoline and 10,000 gallons of diesel are spilled from delivery trucks during underground storage tank (UST) filling operations. The fuel is assumed to leak from severed 6-inch diameter fuel hoses over a period of 1 hour. Toluene was chosen to represent the aromatic portion of the spilled hydrocarbons. Several key events are required for impact. First the substantial release must occur; approximately 5,000 gallons of gasoline and 10,000 gallons of diesel would have to spill. Second, it must be unmitigated for 50 to 60 minutes, the time required to buildup indoor air concentrations to IDLH levels. 1/10 IDLH of Toluene is 200 ppm. Third, the subject site must be downwind and plume centerline during meteorological conditions that maximize downwind concentrations. This is considered a highly improbable scenario due to multiple failures necessary and ideal meteorological conditions. The failures include loss of pipe integrity, shut-off valve failures, operator failures to initiate shut down, and failure to notify emergency responders.

Gas

Acetylene Gas

A worst case gas release would be located at 963 Ames Avenue, located approximately 250 feet east of the subject site. The hazardous materials are stored in a shed in the northeast corner of the site. This facility stores pure acetylene gas in maximum quantities of 630 cubic feet. The 1/10 of IDLH for acetylene is 1 ppm. This scenario assumes that a hazardous release happens

shortly after the holding tank has been completely filled and 630 cubic feet of gas is released in less than 1 hour. Several key events are required for impact. First, the substantial release must occur, 630 cubic feet is released due to a damaged valve. Second, the release would have to be unmitigated for 50 to 60 minutes, the time it would take to buildup indoors to reach significant IDLH level. Third, the subject site must be center plume and downwind during meteorological conditions that maximize downwind concentrations. This is considered a highly improbable scenario due to multiple failures necessary and ideal meteorological conditions.

Ammonia Gas (and Liquid)

A worst case gas release would be located at 1029 Montague Expressway, the site is located approximately 2,770 feet southeast of the subject site. A hazardous materials storage site map was not available in the MFD files for this site. This facility stores pure ammonia gas and liquid in maximum quantities of 8,000 pounds. The 1/10 of IDLH for ammonia is 50 ppm. This scenario assumes that a hazardous release happens shortly after the holding tanks have been completely filled and 8,000 pounds of liquid and gas is spilled from a number of 2,960 pound and smaller tanks, and conditions are right for it to immediately vaporize. The release happens in less than 1 hour. Several key events are required for impact. First, the substantial release must occur, 8,000 pounds are released due to a damaged valve. Second, the release would have to be unmitigated for 50 to 60 minutes, the time it would take to buildup indoors to reach significant IDLH level. Third, the subject site must be center plume and downwind during meteorological conditions that maximize downwind concentrations. This is considered a highly improbable scenario due to multiple failures necessary and ideal meteorological conditions, as well as distance from the subject site.

Liquid

A worst case liquid chemical release would be located at 945 Ames Avenue, approximately 100 feet from the subject site building. This facility stores a pure liquid sulfuric acid in maximum quantities of 350 gallons, with the storage location being a locked gate on the western side of the site, adjacent to the property line. This scenario assumes that a hazardous release happens

shortly after the holding tank has been completely filled and 350 gallons of liquid is spilled in less than 1 hour. Several key events are required for impact. First, the substantial release must occur, 350 gallons is spilled due to a damaged valve or tank sidewalls. Second, the release would have to be unmitigated for 50 to 60 minutes, the time it would take to buildup indoors to reach significant IDLH level. 1/10 IDLH levels for sulfuric acid is 8 mg/m^3. Third, the subject site must be center plume and downwind during meteorological conditions that maximize downwind concentrations. This is considered a highly improbable scenario due to multiple failures necessary and ideal meteorological conditions. However, during the site visit, we observed that Great Western Chemical facility has been replaced by EMS, Environmental Management Services facility. The sulfuric acid tank appears to have been removed from the site, but the files have not been updated in the MFD records.

Three more distant worst case liquid scenarios include hydrochloric acid (1/10 IDLH is 5 ppm) and sodium hydroxide (1/10 IDLH is 25 mg/m^3) stored at the US Filter facility, approximately 250 feet south of the subject property, and methyl methacrylate (1/10 of the IDLH is 400 ppm) stored at Floor Seal facility approximately 500 feet east of the subject property. These three scenarios were modeled in the Plume Modeling, Appendix C. Each is based upon similar release scenarios as above; the holding tanks would have just been filled, an unmitigated release happens in approximately 50 to 60 minutes, the subject site would be downwind. These are considered highly improbable scenarios due to multiple failures necessary and ideal meteorological conditions.

Summary of Plume Modeling

The plume modeling shows that the two worst case scenarios will reach the site with low levels of chlorine gas from hydrochloric acid and methyl methacrylate. These sites are not located directly upwind of the subject site and would therefore require wind conditions not considered normal (Figure 4).

The following is the conclusion section from the plume modeling report:

"Three hazardous materials, HCl, methacrylates and NaOH, were identified in businesses within a quarter-mile radius of the Humane Shelter site on 901 Ames Avenue in Milpitas CA. Of these only HCl is listed by the EPA RMP and Cal ARP Accidental Release Prevention Programs. In fact, HCl is not listed at the 30% concentration but only above 37%. But it was evaluated because it is present in a large quantity and produces chlorine gas. Methacrylate is not listed by EPA or Cal ARP but since it has an IDLH value and is more volatile than HCl (38 vs. 13 mm Hg @25C) it was evaluated. NaOH is not listed at all because it has a very low vapor pressure (1 mmHg at 739 C which is 1,362.20 F) and is a solid at room temperature.

Therefore, HCl and methacrylate were evaluated using EPA's SLAB dispersion model for offsite concentrations.

HCl SLAB concentrations at the Humane Shelter building were modeled using Cal ARP and EPA worse-case assumptions and defaults assuming complete spills of largest containers and worse and reasonable case meteorology in dispersion of vapors. Modeling of indoor release of HCl generated a worse-case concentration of 1370 ppm and a reasonable-case concentration of 112 ppm. For outdoor release these values are 1980 and 158 ppm, respectively. These values are all above the Cal ARP toxic endpoint level of 20 ppm and well above the 5 ppm $1/10^{th}$ IDLH level.

Methacrylate concentrations from indoor release were 40 ppm and 3.5 ppm for worse and reasonable case and 48 and 4.7 ppm with outdoor release. These values were less than the 400 ppm $1/10^{th}$ IDLH limit. No Toxic Endpoint values were given for methacrylate."

CONCLUSIONS

ESCNC conducted a site reconnaissance on March 10, 2004. This was to observe any recognized environmental concerns resulting from possible past or present hazardous materials use, handling, or storage on or near the site and to confirm location of possible impact sites on the map near the subject site. No environmental soil sampling for pesticides, herbicides or other hazardous materials was requested or done for this phase of the project.

A report was prepared by EDR, which conducted a search of 55 governmental databases to determine possible past or present environmental violations, use and storage of hazardous materials, or reported loss of hazardous materials at the subject site and within a one-mile radius of the subject site. None of the listed sites that appear to be in current operation have the potential to impact the subject site. ESCNC does not consider the facilities identified by EDR to pose a recognized environmental concern associated with the subject site.

Based on the information gathered during the site reconnaissance, the reports provided by the MFD, and the report provided by EDR, there is a low chance of hazardous materials release impacting the site within 1/4 mile from the subject site. Six of seven sites within 1/4 mile and 2 of the 4 sites located outside of the 1/4 mile radius but within 1/2 mile radius were found to store or have had incidents that would have a low likelihood to impact the subject site in a hypothetical worst-case release scenario. The City review expressly requested review of 1 site outside of the 1/2 mile radius, which a hypothetical worst-case release scenario would have a low likelihood of impacting the subject site.

From the EDR report, 6 of the 33 HAZNET incidents reported included claims made by previous occupants of the subject site and included waste oil and aqueous solutions with 10 percent organics or halogenated organic compounds. The other HAZNET incident reports include nearby sites for waste oil, oxygenated solvents, inorganic solid waste for vehicle maintenance sites, gasoline product sites and closed sites and aqueous solutions with metals (Allied, closed).

Some of the closed sites have been taken over by other businesses. The 2 historical HAZNET sites still open, within 1/8 mile of the subject site and with a likely potential for future impact to the subject site include Floor Seal and Quality Transformer. Floor Seal is the one site that contains hazardous products in large enough quantity with a health hazard potential and was considered in the Plume Modeling (Appendix C). The other reported incidents have and unlikely potential for future impact to the subject site.

Of the 2 CHMIRS incident sites, one remains open. The closed site is Former Great Western Chemical with sodium hydroxide found in a ditch. The existing site is Bottomley Distributing with an unreported chemical and no specific information, and is located over 1/4 mile northwest of the site. There is an unlikely potential for future impact to the subject site.

LIMITATIONS

This Risk Appraisal Assessment was performed at the request of Scott Merry with Meracon for the Humane Society Silicon Valley for the site located at 901 Ames Avenue in the City of Milpitas, Santa Clara County, California.

It should be noted that an environmental assessment for the property was not requested, property is completely free of chemical or toxic substances; therefore ESCNC cannot offer the certification of a "clean" property. We believe the scope of work performed has been appropriate to allow the owner and the City of Milpitas to make an informed business decision.

The results contained in this report are based upon the information acquired during the risk assessment. Also, changes in conditions found could occur at some time in the future due to updating of records, removals/additions of hazardous materials to neighboring sites, and/or other factors not apparent at the time of the field reconnaissance and records review.

The services performed by ESCNC have been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in this area of California. No other warranty is expressed or implied.

REFERENCES

Environmental Data Resources, Inc., EDR Radius Map with GeoCheck, Madison Avenue Residences, 127 Madison Avenue, San Mateo, San Mateo, California, Inquiry Number 1120892.1r. February 2, 2004.

City of Milpitas Fire Department, Records Department, 455 E. Calaveras Boulevard, Milpitas, California